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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-----------------------|---------------------|------------------|
| 10/560,362 | 04/27/2006 | Evripidis Koukouravas | 016906-0453 | 9012 |
| 22428 | 7590 | 03/02/2010 | EXAMINER | |
| FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | | FORD, JOHN K |
| 3744 | | ART UNIT | | PAPER NUMBER |
| 03/02/2010 | | MAIL DATE | | DELIVERY MODE |
| | | | | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/560,362 | KOUKOURAVAS ET AL. | |
| | Examiner | Art Unit | |
| | John K. Ford | 3744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 December 2005 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/12/05 and 01/13/10</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: ____ . |

The drawings are objected to because the drawings are so dark (Figures 2-6) and riddled with stray markings (Figures 1, 7 and 8) that they are incomprehensible. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. No new matter can be entered.

The examiner reserves a right make a species restriction if comprehensible drawings, without the introduction of any new matter, are submitted in response to the above drawing objection(s).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are replete with functional recitations “for” and other vagaries such as “in particular” that make it difficult to ascertain what the minimum number of components an accused infringing device would need to have to infringe these claims. If applicant feels differently, applicant is required to state for each of claims 1-17 what minimum number of components an accused infringing device would need to have to infringe each of these claims. For example, what “in particular” gaseous mediums would infringe or not infringe? The nature of limitation “modular” is not understood from either the specification or the claims. What makes these devices modular? How are they modular? Claims 3 and 6 appear to be improper Markush groups. See the MPEP for examples of proper Markush practice. In claim 8, there is no antecedent basis for “the air.” Claim 17 is confusing – are you defining a new overall combination in claim 17? If so what is that combination? In claim 17, is the vehicle part of the combination or not? Make it clear.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2002-307935.

Regarding claims 1, 4, 5, 6 and 17, JP '935 shows a vehicular air conditioner unit having a housing (generally at 1), a first apparatus for exchanging heat (evaporator 6 and its associated compressor, condenser and expansion valve, not shown), a second apparatus for exchanging heat (heater 7), an air inlet (generally at 3), an air outlet (at 45) and an air flow control device (42a and 47a). In Figures 6(a) and 6(b) a receiving device is shown in the casing for receiving a modular electric heater (8) (applicant's third apparatus of claim 6). The receiving device is closed off by a cover 12. As shown in Figures 5(a) and 5(b), the modular electric heater can be replaced by a modular blanking device 12a. Regarding claims 2 and 3, the modular electric heater (8) influences the temperature of the medium by exchanging heat with it. Regarding claim 7, a flow control device (47a) is shown in the outlet duct 45 at its discharge point into the vehicle compartment. Regarding claims 8 and 11, see door 41 and the opening to the right of the door through which the air bypasses the heater 7. Regarding claims 9 and

10, the second apparatus for exchanging heat (heater 7) and the modular electric heater 8 are adjacent to one another as well as parallel to one another.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-307935 in view of JP 61-85218.

The explanation of JP '935, above, is incorporated here by reference. Regarding claims 12-16, it would have been obvious to one of ordinary skill in the art to have connected the compressor 1, condenser 2 (with two separate sections 2a and 2b controlled by valve 10), receiver 3 and expansion valve 4, back pressure valve 7 and return line 6 of JP 61-85218 to the evaporator 6 of JP '935 so that the evaporator 6 of JP '935 would perform its conventional cooling function (advantageously without freezing up the evaporator as taught by JP '218). Regarding claims 12-16, there are two flow paths 2a and 2b through the apparatus for the exchange of heat through which refrigerant passes. The two feeds for refrigerant branch upstream of valve 10. The common discharge line takes the refrigerant to the receiver 3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John K. Ford/
Primary Examiner, Art Unit 3744